

**PROPOSED MODIFICATIONS TO  
THE DRAFT 2007 AQMP APPENDIX IV-C**

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**REGIONAL TRANSPORTATION STRATEGY AND  
CONTROL MEASURES**

**FEBRUARY 2007**

**[The section entitled Regional Benefits of Compass has been updated. Appendix IV-C, page 8, 4<sup>th</sup> paragraph]**

### **Regional Benefits of Compass**

As part of the 2004 RTP planning process, the RTP was analyzed relative to baseline conditions. The analysis revealed that the strategies of the 2004 RTP contribute benefits to mobility, transit boarding, air quality and energy consumption over the forecast period. ~~Of the benefits attributed to the 2004 RTP in year 2030, it was estimated that the Compass Vision distribution contributed approximately 50% of the VMT reduction, approximately 20% of the vehicle hours traveled (VHT) reduction, approximately 10% increased transit boarding, and approximately 70% of the reactive organic gas (ROG) emission reductions.~~ The 2007 AQMP, while based on the 2004 RTP, incorporates changes to emission factors based on ARB's EMFAC2007 and to the socioeconomic data based on actual changes since the 2004 RTP was prepared. While the Compass 2% Strategy assumptions remain the same, these other changes result in revised emission projections and benefits compared to what was shown for the 2004 RTP. For example, Growth Visioning in the 2007 AQMP is estimated to contribute a reduction of approximately 0.5 ton per day of ROG in the year 2020 (approximately 30% of total reductions) versus a reduction of approximately 2 tons per day in 2020 (approximately 70% of total reductions) when analyzed for the 2004 RTP. It should be noted that the emission benefits attributed to Compass reflect only grosser changes in land use, and do not account for the micro land use changes that are assumed in Compass and are expected to provide additional transportation and emission benefits. SCAG is working to develop additional analytical tools to better calculate the benefits attributable to the Compass program.

**[Additional information has been added to the section entitled SCAG's Goods Movement Program and Studies. Appendix IV-C, page 13, added after 1<sup>st</sup> paragraph]**

### **Goods Movement Control Measure**

As part of the Transportation Strategy for the 2007 AQMP, SCAG is proposing a Goods Movement Control Measure which consists of three main components: High Speed Rail System, Truck-Only Lanes, and Shipping Line Emission Controls.

### **High Speed Rail Transport System**

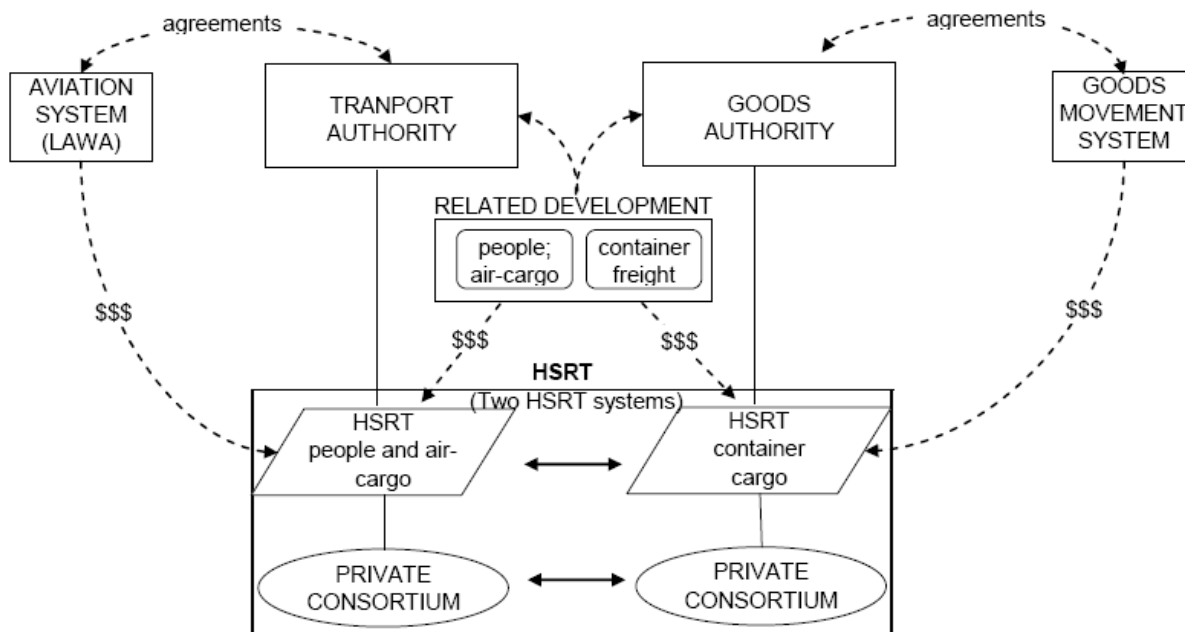
SCAG has recently advanced a vision of additional regional movement systems based on the introduction of a high speed, high performance, environmentally sensitive regional transport system (HSRT). Envisioned to move both cargo and people throughout the region, the HSRT would serve to:

- Link the San Pedro Bay ports with an inland port facility. This would provide capacity to handle containers relieving a major constraint to port expansion while providing an environmentally sound and cost effective solution to the goods movement challenge.
- Create a direct, high-speed link between the urban centers and the airports. This would enable a higher level of service for airport access and connecting passengers, improved operation of the aviation system for passengers and airborne cargo, and optimize investment in aviation system infrastructure. This view envisions the continued use of Los Angeles International Airport (LAX) as a hub while allocating future traffic to other regional airports based on a high-speed connection via the HSRT.
- Link the urban centers, serving the needs of commuters while reducing the number of private vehicles on the road mode. This would lead to reduced traffic congestion, enhanced accessibility, as well as reduced air and noise pollution from automobiles. Additionally, enhanced accessibility at transit stations would enable intensification of land uses and thereby encourage more effective land use patterns

Relative to goods movement, an HSRT system can provide greater throughput and reliability with near zero emissions (see section on Innovative Goods Movement Technology below). Essentially, goods would be shuttled from the Ports to an inland port at San Bernardino and/or Palmdale via a HSRT container movement system. A HSRT system capitalizes on the inherent savings of multiple uses on a single infrastructure by operating on shared alignments with the HSRT people movement system. The technology permits operation of HSRT freight vehicles on a shared guide-way with passenger vehicles even during peak hour service. Freight vehicle trips can be interspersed with passenger trips while still meeting required passenger vehicle headways. Additionally, full utilization of the freight line can be achieved during the passenger system's off-peak hours.

Implementation of the HSRT is being proposed on the basis of a business plan approach whereby it will be self-financing based on aviation, commuter, and freight operations and further bolstered by HSRT related development. The deployment of a HSRT system would create value in associated components which could in turn contribute to the HSRT's total financial performance. A business and institutional structure for the movement of people, movement of goods, and associated development patterns has been developed by SCAG to serve as the basis for implementation of the movement systems. The results reached by SCAG's business planning effort indicate that HSRT-based systems for aviation, goods, and people movement can fulfill the objective of financial independence and feasibility.

A schematic of the business plan is shown below.



Efforts to evaluate a smaller scale advanced technology system are being undertaken by the Ports of Long Beach and Los Angeles. The Ports have jointly initiated a Request for Proposal to conduct a systems analysis of advanced transportation technologies for moving containers from the ports to near-dock rail facilities. The study will compare and contrast the costs and benefits of these systems to conventional drayage, with and without cleaner truck engines and cleaner fuels. Additionally, the I-710 Corridor Project, led by the Los Angeles County Metropolitan Transportation Authority, will evaluate a range of alternatives for improving corridor congestion, including a review of advanced technologies capable of transporting freight from the ports to downtown Los Angeles. Further, SCAG expects to issue an RFP (1<sup>st</sup> quarter 2007) to conduct a feasibility study of alternative freight transport system from the ports to a potential inland port location.

### **Truck-Only Lanes**

SCAG is formulating a business plan for a regional truckway system comprising 142 center-line miles of dedicated truck lanes extending from the San Pedro Bay ports eastward toward Barstow. The dedicated truckways offer a viable and partially self-financing solution for mitigating congestion and reducing mobile source emissions. The system would have a graduated toll rate based on a number of factors including the relative emissions associated with each vehicle. The truck-only lane would allow each truck to carry multiple containers, further improving the efficiency and financial viability of the system. The EIR/EIS for the I-710 Corridor project mentioned above will include evaluation of specific alternatives for the first segment of a truckway system from the ports to downtown Los Angeles.

### **Ship Emissions Control**

SCAG is also in discussions with shipping lines and shippers to develop a financing mechanism to provide monies for emissions mitigation and system efficiencies for ships delivering goods to the Ports of Long Beach and Los Angeles.

Taken together, the various components of an overall goods movement strategy are the basis for a goods movement transportation control measure. The enforceability of this measure is predicated on binding agreements, financing, and pricing mechanisms through existing Joint Powers Authorities or other applicable institutions or agencies.

A supplemental/alternative approach to achieving emission reductions could take the form of an emissions reduction market based on binding agreements among the parties and performance commitments included in the SIP.<sup>1</sup>

Because of the complexity of the issues and the numerous on-going and planned efforts of the goods movement stakeholders, ~~the~~ this control measure will be further refined as part of the 2007/8 RTP. ~~development of a comprehensive goods movement plan is beyond the timeframe of the 2007 AQMP. It is expected that the efforts underway will primarily help refine the goods movement strategies in the existing 2004 RTP, as well as introduce new technological strategies and environmental mitigation measures being investigated throughout the region. Accordingly, they will provide the basis for the goods movement portion of the next RTP update which is scheduled for adoption in December 2007 or the first quarter of 2008. The goods movement strategy developed for the RTP could then become the basis for a SIP amendment which incorporates applicable emission reduction strategies.~~

**[A footnote has been added to Table 2 - Goods Movement Programs and Studies. Appendix IV-C, page 14, to indicate that three of the studies are being combined to one study - Goods Movement Conceptual System Design Phase I & II, Feasibility of Innovative Freight Technologies, and Study of Freight Movement by High Speed Rail]**

**[The sections entitled Rollover of TCM Projects and Adoption Procedures for RTIP Rollover of TCM Projects have been updated. Appendix IV-C, page 36]**

### **Rollover of TCM Projects (RTIP Update)**

Approximately every two years, as the RTIP is updated, additional TCMs will be added to the AQMP/SIP ~~TCM list~~ based on the new RTIP and the RTIP Guidelines. ~~The~~ is ~~the~~ “rollover” of TCMs list ~~will update the AQMP/SIP to include new projects in addition to ongoing projects from previous RTIPs. Completed projects (projects that have completed construction or have service in place) will be reported as complete and removed from the list. The rollover~~ TCMs list

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<sup>1</sup> A proposal along these lines was included as Appendix G: Maritime Goods Movement Coalition Proposal, *Proposed Emission Reduction Plan for Ports and Goods Movement in California*, Approved by ARB on April 20, 2006.

“rolled over” will be monitored for adherence to the schedule established in the RTIP at the time a project is identified as a committed TCM. The identification of TCMs from the RTIP shall be agreed upon by both SCAG and the appropriate CTCs.

For tracking and monitoring purposes, SCAG prepares a timely implementation report with each RTIP. Once a TCM project or program is committed for implementation in the first two years of the RTIP, that project must be implemented by the completion date in the prevailing RTIP or timely implementation report. The list of TCMs included in the AQMP/SIP appropriately does not include a timely implementation report. Completed projects (projects that have completed construction or have service in place) will be reported as complete and removed from the timely implementation report. Timely implementation reporting is done only when the RTIP is updated. The list of TCMs included in the AQMP/SIP does not include a timely implementation report.

The rollover process will apply to any RTIP that requires a full conformity analysis and finding. Generally, a new RTIP is required every two years in accordance with state and federal planning requirements. However, a new RTIP can be more frequent, for example a new RTIP is required within six months of the adoption of a new RTP. The described TCM rollover process shall apply in such cases as well.

#### **Adoption Procedures for RTIP Rollover of TCM Projects**

The rollover of the RTIP must be adopted by SCAG’s Regional Council, in accordance with the RTIP adoption process, as described below.

- The Draft RTIP is reviewed by various SCAG Committees, Task Forces, and Working Groups, such as the standing Transportation and Communication Committee, and the Technical Advisory Committee, and the TCWG;
- The Transportation Conformity Working Group (TCWG), which serves as the interagency consultation group, reviews the proposed TCMs and RTIP;
- Public notification is provided through major newspapers in the affected sub-regions as well as on SCAG’s website;
- Draft RTIP materials are distributed, with appropriate cover letters, to approved public libraries and facilities and also made available on SCAG’s website for access by the public;
- Input received is compiled and analyzed, and responses to comments are provided by SCAG Staff, and made available to the public;
- A summary of comments received during the public comment period along with SCAG’s responses, following the close of the public comment period, is incorporated into the final RTIP;
- The Final RTIP is adopted by SCAG’s Regional Council; ~~and~~
- Pursuant to SAFETEA-LU, the additional TCMs are submitted to the State air pollution control agency and the US EPA Administrator for concurrence. Upon approval, the TCMs become part of the applicable AQMP/SIP; and

- SCAG's adopted RTIP is submitted to the State for funding approval and to the federal agencies (FHWA, FTA and EPA) for final funding and conformity approval.
- ~~Upon federal approval of the RTIP, the new TCMs become part of the applicable AQMP/SIP.~~

**[The discussion of substitution of individual TCM projects has been updated. Appendix IV-C, page 37, 2<sup>nd</sup> paragraph]**

Substitution of individual TCMs will follow the process specified in the CAA section 176(c) outlined in SAFETEA-LU. ~~Section 6011(d) of SAFETEA-LU~~ 176(c) of the CAA allows for the substitution of individual TCMs if certain conditions are met. These include:

**[The section on regional transportation emissions has been revised to account for the use of EMFAC2007. Appendix IV-C, page 42]**

## **REGIONAL TRANSPORTATION EMISSIONS**

Based on the data generated from SCAG's Transportation Demand Model (e.g., traffic volumes, vehicle speeds, transit ridership, etc.), an estimate of emissions associated with on-road mobile sources can be generated using CARB's emission factor model (EMFAC). Through this process, future emissions from on-road mobile sources can be compared for the regional transportation system assuming implementation of the RTP versus a baseline case without RTP implementation.

One of the key goals of conventional transportation planning has been the provision of sufficient roadway capacity to reduce congestion and improve mobility through improvements to regional networks of highways and arterials. And, to the extent that congestion is relieved, there are significant regional air quality benefits to such flow-improving interventions. Thus, the emissions benefits historically demonstrated in previous AQMPs and air quality analyses performed for the RTP and the RTIP have been based on the congestion relief effects associated with both added infrastructure capacity and implementation of TCMs. It is generally understood, however, that potential future improvements in air quality deriving from the RTP and TCMs will be ~~minimal~~ much smaller, since motor vehicle emissions have and will continue to be substantially reduced through technology (i.e., emission standards for new engines and in-use standards for existing fleets). For instance, the emissions of ROG go from approximately 300 tons per day in 2005 to approximately 82 tons per day in 2030. Further, most of the TCM projects in the South Coast Air Basin were adopted into the SIP to meet the one-hour ozone standard by 2010 and have already been implemented. Thus, the emission reductions associated with these projects are now included in the baseline emissions and no longer show up in the TCM benefit values.

The modeling exercises performed for the Final Draft 2007 AQMP are intended to evaluate emissions associated with the transportation strategy (i.e., the RTP) relative to baseline conditions for ROG, NO<sub>x</sub>, and PM<sub>2.5</sub>. Additional modeling exercises were performed to estimate the contribution of TCMs and the Compass Growth Visioning program to the emissions profile of the overall transportation strategy. For the TCM modeling exercise, socio-economic data variables were held constant and the transportation network was modified to account for the TCMs. To estimate the benefits of Compass, the transportation network was held constant and socio-economic data associated with Compass was modified between baseline and project conditions. It must be noted, however, that the regional transportation strategy is appropriately viewed on a systems-level basis and not by its components (e.g., TCMs, Compass, etc.) since each of the individual transportation improvements and strategies affect each other and the system. Isolating and summing the emissions effect of each transportation improvement and strategy cannot provide an accurate representation of the system's emissions because the interactions and feedback among these components alters the end results. Nevertheless, for purposes of discussion, Table 7 provides the results of the modeling analyses for the RTP as a whole as well as those for the TCM and Compass components of the RTP for the attainment years 2014 (PM<sub>2.5</sub>), 2020 (8-hour ozone), and 2023 (8-hour ozone assuming a "bump-up" to extreme nonattainment). demonstrates a decrease in ROG, CO, and PM<sub>2.5</sub> emissions from on-road mobile sources for the milestone years of 2010, 2015, 2020, and 2023. However, while NO<sub>x</sub> emissions decrease in the year 2010, the currently available emissions model (EMFAC2002) predicts NO<sub>x</sub> increases in the milestone years 2015, 2020, and 2023 (see Table 7)

The increase in NO<sub>x</sub> emissions is attributed to heavy duty trucks. Based on the best data available at the time the EMFAC2002 was developed, this emissions model includes a NO<sub>x</sub> "speed curve" for heavy duty trucks that predicts an increase in NO<sub>x</sub> emissions as vehicle speeds exceed approximately 35 miles per hour. It is assumed that the NO<sub>x</sub> increase seen in later years is due to the congestion relief effects of the RTP and TCMs.

CARB is currently in the process of developing the next generation EMFAC (i.e., EMFAC2007) with a scheduled release date of November 2007. The EMFAC2007 development process includes a proposal to revise heavy duty truck speed correction factors to account for new information. The proposed NO<sub>x</sub> speed curves have a much flatter shape relative to EMFAC2002. This may demonstrate lower NO<sub>x</sub> emissions associated with heavy duty trucks in future years, though, considering changes are also proposed to the heavy duty truck emission factors, the ultimate effect of the new EMFAC model on the draft NO<sub>x</sub> emissions values reported here cannot be accurately predicted.

The draft emissions values shown below will be updated once the new EMFAC model is publicly available. Additionally, It should be noted that SCAG has been working with modeling experts and practitioners to develop a new Transportation Demand Model that is expected to more accurately forecast highway traffic volumes, speeds, and other aspects of the transportation system. The new Transportation Demand Model will be used for the Final 2007 AQMP if available within the development schedule of the AQMP. The new model is in the process of being calibrated and validated. Model runs, with a preliminarily calibrated and validated model, seem to be consistent with the interim model emissions in the South Coast.

**Table 7**  
**Transportation Strategy Emissions**  
**(tons per day)**

<b><u>Pollutan</u></b> <b><u>t</u></b>	<b><u>2010</u></b>			<b><u>2014</u></b>			<b><u>2020</u></b>			<b><u>2023</u></b>		
	<b><u>RTP</u></b>	<b><u>TCMs</u></b>	<b><u>Compass</u></b>	<b><u>RTP</u></b>	<b><u>TCMs</u></b>	<b><u>Compass</u></b>	<b><u>RTP</u></b>	<b><u>TCMs</u></b>	<b><u>Compass</u></b>	<b><u>RTP</u></b>	<b><u>TCMs</u></b>	<b><u>Compass</u></b>
<b><u>ROG</u></b>	<b><u>-2.86</u></b>	<b><u>**</u></b>	<b><u>***</u></b>	<b><u>-1.79</u></b>	<b><u>-1.07</u></b>	<b><u>***</u></b>	<b><u>-1.68</u></b>	<b><u>-0.83</u></b>	<b><u>-0.50</u></b>	<b><u>-1.74</u></b>	<b><u>-0.90</u></b>	<b><u>-0.67</u></b>
<b><u>NOX</u></b>	<b><u>-1.01</u></b>	<b><u>**</u></b>	<b><u>***</u></b>	<b><u>-0.01</u></b>	<b><u>-3.54</u></b>	<b><u>***</u></b>	<b><u>0.25</u></b>	<b><u>-2.20</u></b>	<b><u>-0.47</u></b>	<b><u>-0.21</u></b>	<b><u>-2.11</u></b>	<b><u>-0.64</u></b>
<b><u>PM2.5 *</u></b>	<b><u>-0.26</u></b>	<b><u>**</u></b>	<b><u>***</u></b>	<b><u>-0.24</u></b>	<b><u>-0.18</u></b>	<b><u>***</u></b>	<b><u>****</u></b>	<b><u>****</u></b>	<b><u>****</u></b>	<b><u>****</u></b>	<b><u>****</u></b>	<b><u>****</u></b>

Note: negative value indicates an emissions reduction

PM2.5 and all 2014 values based on annual emissions inventory; all others are summer planning inventory

\* Does not include fugitive dust emissions.

\*\* TCMs benefit shown for attainment years only

\*\*\* Implementation of Compass Growth Visioning Program occurs after 2014

\*\*\*\* PM2.5 attainment required by 2015

Pollutant	2010	2015	2020	2023
ROG	-3.76	-2.68	-1.64	-1.04
NO <sub>x</sub>	-0.75	+1.06	+2.51	+2.51
PM <sub>2.5</sub>	-0.37	-0.44	-0.60	-0.55
CO	-37.64	-27.59	-19.36	-13.47

**[The RACM analysis discussion has been revised. Appendix IV-C, page 48, 1<sup>st</sup> paragraph]**

To develop a list of candidate RACM, SCAG performed a review of available TCMs in California, as well as in other states. SCAG reexamined the candidate RACM identified during the comprehensive RACM analysis performed for the 2003 AQMP. Additionally, SCAG coordinated with other MPOs and air quality districts to identify measures that are being implemented or considered in other nonattainment areas. SCAG reviewed TCMs implemented in California from various nonattainment areas (Sacramento, San Joaquin Valley, and the Bay Area). SCAG also coordinated with other agencies outside of the SCAG region in an effort to ensure that all RACM were considered (the Houston-Galveston Area Council [H-GAC] in Texas; Metropolitan Washington Council of Governments [MWCOC] in Washington D.C.; the Maricopa County Air Quality Department in Arizona, and the North Central Texas Council of Governments [NCTCOG]).<sup>2</sup> SCAG also utilized information from Arizona and Texas obtained in the 2003 AQMP RACM Analysis. The comprehensive list of candidate TCMs for RACM compiled in the UC Davis-Caltrans Air Quality Project, *Transportation Control Measures: Guidance for Conformity and State Implementation Plan Development* (August 2004), was also reviewed as part of the current RACM analysis.

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<sup>2</sup> Texas Commission on Environmental Quality (December 13, 2006). *Dallas-Fort Worth 8-hour Ozone Nonattainment Area Attainment Demonstration: Revisions to the State Implementation Plan (SIP) for the Control of Ozone Air Pollution*. Available at: <http://www.tceq.state.tx.us/implementation/air/sip/dfw.html>.

## **ATTACHMENT A**

### **2007 AQMP Transportation Control Measures (TCMs)**

## Modifications to Attachment A: 2007 AQMP TCM Projects

[*HOV Improvements - New HOV Lanes, Extensions, Additions to Existing Facilities* has been updated. Projects LA990353, LA0C56, and LA0C57 were removed from this category and appropriately included under the *Systems Management* category; Appendix IV-C, Attachment A, page A-2]

HOV Improvements - New HOV Lanes, Extensions, Additions to Existing Facilities			
Lead Agency	Project ID	Description	2006 RTIP Completion Date
LOS ANGELES COUNTY	LA990353	ALAMEDA CORRIDOR EAST - NOGALES ST. GRADE SEP (T21-401, SGVCG)	2008
SAN GABRIEL VALLEY COG	LA0C56	ACE/GATEWAY CITIES CONSTRUCT GRADE SEPARATION AT VALLEY VIEW AVENUE IN SANTA FE SPRINGS (PART OF ALAMEDA CORRIDOR EAST PROJECT)	2008
SAN GABRIEL VALLEY COG	LA0C57	ACE/GATEWAY CITIES CONSTRUCT GRADE SEPARATION AT PASSONS BLVD IN PICO RIVERA (AND MODIFY PROFILE OF SERAPIS AVENUE)(PART OF ALAMEDA CORRIDOR EAST PROJECT).	2010

## Modifications to Attachment A: 2007 AQMP TCM Projects

[High Occupancy Toll (HOT) Lanes and Pricing Alternatives has been updated. Appendix IV-C, Attachment A, page A-6]

High Occupancy Toll (HOT) Lanes and Pricing Alternatives			
Lead Agency	Project ID	Description	2006 RTIP Completion Date
TCA	10254	SJHC, 15 MI TOLL RD BETWEEN I-5 IN SAN JUAN CAPISTRANO & RTE 73 IN IRVINE, EXISTING 3/M/F EA.DIR.1 ADD'L M/F EA DIR, PLUS CLIMBING & AUX LNS AS REQ, BY 2015 PER SCAG/TCA MOU 4/5/01. [2008 COMPLETION DATE FOR PHASE 1 ONLY]	2008
TCA	ORA050	ETC (RTE 241/261/133) TOLL RD (RTE 91TO I-5/JAMBOREE) EXISTING 2 M/F EA.DIR, 2 ADD'L M/F IN EA. DIR, PLUS CLIMB AND AUX LNS AS REQ, BY 2015 PER SCAG/TCA MOU 4/05/01. [2010 COMPLETION DATE FOR PHASE 1 ONLY]	2010
TCA	ORA051	(FTC-N) TOLL RD (OSO PKWY TO ETC) (13MI) EXISTING 2 MF IN EA. DIR; 3 MF EA. DIR BY 2010; 4 MF EA. DIR BY 2015, PLS CLMBNG & AUX LANS PER SCAG/TCA MOU 4/05/01. [2010 COMPLETION DATE FOR PHASE 1 ONLY]	2010
TCA	ORA052	(FTC-S) TOLL RD (I-5 TO OSO PKWY) (15MI) 2 MF EA. DIR BY 2010; AND 1 ADDITIONAL M/F EA. DIR. PLS CLMBNG & AUX LANES AS REQ BY 2015 PER SCAG/TCA MOU 4/05/01. [2010 COMPLETION DATE FOR PHASE 1 ONLY]	2010

## Modifications to Attachment A: 2007 AQMP TCM Projects

[Transit - Express Busways, Bus Rapid Transit, and Dedicated Bus Lanes has been updated. Project LA0D45 was removed from this category. Appendix IV-C, Attachment A, page A-9]

Transit - Express Busways, Bus Rapid Transit, and Dedicated Bus Lanes			
Lead Agency	Project ID	Description	2006 RTIP Completion Date
ALAMEDA TRANSPORTATION CORRIDOR AGENCY	LA0D45	ALAMEDA CORRIDOR TRUCK EXPRESSWAY. ELEVATED 4 LANE EXPRESSWAY BETWEEN COMMODORE HELM BRIDGE AND ALAMEDA STREET (SR-47).	2011

## Modifications to Attachment A: 2007 AQMP TCM Projects

[A new project category labeled *System Management – Railroad Consolidation Programs* has been added. This category was developed from language originally contained in Project Category B. *Transit and System Management Systems* (Appendix IV-C, Table 4, TCM Project Categories, page 39).

Projects LA990353, LA0C56, and LA0C57, which were originally under *HOV Improvements - New HOV Lanes, Extensions, Additions to Existing Facilities*, and LA0D45, which was originally under *Transit - Express Busways, Bus Rapid Transit, and Dedicated Bus Lanes*, were moved to this category.]

<b>System Management – Railroad Consolidation Programs</b>			
<b><u>Lead Agency</u></b>	<b><u>Project ID</u></b>	<b><u>Description</u></b>	<b><u>2006 RTIP Completion Date</u></b>
<u>LOS ANGELES COUNTY</u>	<u>LA990353</u>	<u>ALAMEDA CORRIDOR EAST - NOGALES ST. GRADE SEP (T21-491, SGVCG)</u>	<u>2008</u>
<u>SAN GABRIEL VALLEY COG</u>	<u>LA0C56</u>	<u>ACE/GATEWAY CITIES-CONSTRUCT GRADE SEPARATION AT VALLEY VIEW AVENUE IN SANTA FE SPRINGS (PART OF ALAMEDA CORRIDOR EAST PROJECT)</u>	<u>2008</u>
<u>SAN GABRIEL VALLEY COG</u>	<u>LA0C57</u>	<u>ACE/GATEWAY CITIES-CONSTRUCT GRADE SEPARATION AT PASSONS BLVD IN PICO RIVERA (AND MODIFY PROFILE OF SERAPIS AVENUE)(PART OF ALAMEDA CORRIDOR EAST PROJECT).</u>	<u>2010</u>
<u>ALAMEDA TRANSPORTATION CORRIDOR AGENCY</u>	<u>LA0D45</u>	<u>ALAMEDA CORRIDOR TRUCK EXPRESSWAY. ELEVATED 4-LANE EXPRESSWAY BETWEEN COMMODORE HELM BRIDGE AND ALAMEDA STREET (SR-47).</u>	<u>2011</u>

## **ATTACHMENT C**

### **Reasonably Available Control Measure (RACM) Analysis**

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 1. Programs for Improved Public Transit has been updated. Appendix IV-C, Attachment C, page C-1]

Section 108 (f) 1. Programs for Improved Public Transit					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
1.7	Free transit during special events	Require free transit during selected special events to reduce event-related congestion and associated emission increases.	No	<p>The Legislature significantly reduced authority to implement indirect source control measures through revisions to the Health &amp; Safety Code (<del>HSC 40717.6</del>, HSC 40717.8, <del>HSC 40717.9</del>).</p> <p><u>Transit agencies should decide individually whether this measure is economically feasible for them.</u></p>	

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 3. Employer-based Transportation Management Plans, Including Incentives has been updated. A footnote has been added to these measures to indicate their relation to AQMD Rule 2202, On-Road Vehicle Mitigation Options. Appendix IV-C, Attachment C, pages C-4 through C-6]

Section 108 (f) 3. Employer-based Transportation Management Plans, Including Incentives					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
3.1*	Commute solutions	The federal law that complements parking cash-out is called the <i>Commuter Choice Program</i> . It provides for benefits that employers can offer to employees to commute to work by methods other than driving alone.	Yes		AQMD, <u>Employer</u>
3.2*	Parking cash-out	State law requires certain employers who provide subsidized parking for their employees to offer a cash allowance in lieu of a parking space.	Yes		AQMD, <u>Employer</u>
3.3*	Employer Rideshare Program Incentives	Employer rideshare incentives and introduction of strategies designed to reduce single occupant vehicle trips. Examples include: public awareness campaigns, Transportation Management Associations among employers, alternative work hours, and financial incentives.	Yes		AQMD, <u>Employer</u>
3.4*	Implement Parking Charge Incentive Program	Evaluate feasibility of an incentive program for cities and employers that convert free public parking spaces to paid spaces. Review existing parking policies as they relate to new development approvals.	Yes		AQMD, <u>Cities, Employer</u>
3.5*	Preferential parking for carpools and vanpools	This measure encourages public and private employers to provide preferential parking spaces for carpools and vanpools to decrease the	Yes		AQMD, <u>Employer</u>

\* This measure relates to AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Rule 2202 provides a menu of options for employers in choosing how they will comply with the rule. The primary implementer is the employer.

## Modifications to Attachment C: RACM Analysis

Section 108 (f) 3. Employer-based Transportation Management Plans, Including Incentives					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
		number of single occupant automobile work trips. The preferential treatment could include covered parking spaces or close-in spaces.			
3.6*	Employee parking fees	Encourage public and private employers to charge employees for parking.	Yes		AQMD, Employer
3.7*	Merchant transportation incentives	Implement "non-work" trip reduction ordinances requiring merchants to offer customers mode shift travel incentives such as free bus passes and requiring owners/managers/developers of large retail establishments to provide facilities for non-motorized modes.	No	The Legislature <u>has limited</u> <del>removed</del> authority to implement <del>indirect source control</del> <u>employee trip reduction</u> measures through revisions to the Health & Safety Code ( <del>HSC 40717.6, HSC 40717.8, HSC 40717.9.</del> )	
3.8*	Purchase vans for vanpools	Purchase a specified number of vans for use in employee commute travel.	Yes		AQMD, <u>Employer</u>
3.9*	Encourage merchants and employers to subsidize the cost of transit for employees	Provide outreach and possible financial incentives to encourage local employers to provide transit passes or subsidies to encourage less individual vehicle travel.	Yes		AQMD, <u>Employer</u>
3.10	<del>Off days for Ozone Action Days similar to sick days</del>	<del>On Ozone Action Days, notify employees through email that there is an ozone alert. Employees are given a pre-specified number of days they can decide not to come in to work on Ozone Action Days.</del>	Yes		AQMD
3.11	Pay for in-house meals on Ozone	Employer pays for meals in-house on Ozone	No	The Legislature significantly	

\* This measure relates to AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Rule 2202 provides a menu of options for employers in choosing how they will comply with the rule. The primary implementer is the employer.

## Modifications to Attachment C: RACM Analysis

Section 108 (f) 3. Employer-based Transportation Management Plans, Including Incentives					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
	Action Days	Action Days so that employees do not travel to off-site locations.		reduced authority to implement indirect source control measures through revisions to the Health & Safety Code (HSC 40717.6, HSC 40717.8, HSC 40717.9).	
3.12	<del>Voluntary business closures on Ozone Action Days</del>	A more expensive version of "off-days" for Ozone Action Days.	Yes		AQMD
3.13	<del>Close government offices on Ozone Action Days to serve as an example</del>	Similar to voluntary business closures.	No	The Legislature removed authority to implement indirect source control measures through revisions to the Health & Safety Code (HSC 40717.6, HSC 40717.8, HSC 40717.9).	
3.14*	Compressed work weeks	Self explanatory.	Yes		AQMD, Employer
3.15*	Telecommuting	Goal of specified percentage of employees telecommuting at least once per week.	Yes		AQMD, Employer

\* This measure relates to AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Rule 2202 provides a menu of options for employers in choosing how they will comply with the rule. The primary implementer is the employer.

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 4. Trip Reduction Ordinance has been updated. Appendix IV-C, Attachment C, page C-7]

### Section 108 (f) 4. Trip Reduction Ordinance

In December 1995, Congress changed the Clean Air Act Amendments to make the Employee Commute Option program voluntary (no longer mandatory). California State Law prohibits mandatory employer based trip reduction ordinance programs (SB437). (HSC 40717.9) To account for these restrictions, SCAQMD Rule 2202 provides employers with a menu of options to reduce mobile source emissions generated from employee commutes. Rule 2202 complies with federal and state Clean Air Act requirements, HSC 40458, and HSC 182(d) (1) (B) of the federal Clean Air Act. Nevertheless, some jurisdictions continue to implement Trip Reduction Ordinances. For example, the City of Santa Monica requires new and existing non-residential development projects to adopt Emission Reduction Plans and pay transportation impact fees to reduce traffic congestion and improve air quality in the city

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 5. Traffic Flow Improvement Programs that Achieve Emissions Reductions has been updated. Measures 5.11 and Measure 5.12, which relate to Ozone Action Days, were removed because they do not meet the TCM criteria. Appendix IV-C, Attachment C, page C-9]

Section 108 (f) 5. Traffic Flow Improvement Programs that Achieve Emissions Reductions					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
5.11	<del>Consider coordinating scheduling of arterial and highway maintenance to exclude Ozone Action Days if the maintenance activities require lane reductions on heavily utilized arterials and highways</del>	<del>Self explanatory.</del>	<del>Yes</del>		<del>AQMD, Caltrans</del>
5.12	<del>Re-routing of trucks Ozone Action Days</del>	<del>Self explanatory.</del>	<del>Yes</del>		<del>AQMD</del>

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use has been updated. Appendix IV-C, Attachment C, pages C-13 through C-15]

Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
7.1	Off-peak goods movement	Implement an ordinance to restrict truck deliveries by time or place in order to minimize traffic congestion during peak periods.	<del>Yes</del> No	<u>Not economically feasible.</u>	AQMD
7.2	Truck restrictions during peak periods	Implement an ordinance to restrict truck travel during peak periods in order to minimize traffic congestion.	<del>Yes</del> No	<u>Not economically feasible.</u>	AQMD
7.4	Adjust school hours so they do not coincide with peak traffic periods and ozone seasons	Measure to reduce travel during peak periods and ozone-contributing periods in the early morning.	Yes		<del>AQMD</del> <u>School Districts</u>
7.6	Increase parking fees	Reduce driving by limiting parking through pricing measures.	No	<u>Attorney General ruled AQMD lacks authority to implement this measure. The Legislature significantly reduced authority to implement indirect source control measures through revisions to the Health &amp; Safety Code (HSC 40717.6, HSC 40717.8, HSC 40717.9).</u>	
7.8	Buy parking lots and convert to other land use	Limit parking by converting available parking to other land uses to discourage driving.	Yes		Cities
7.9	Limit the number of parking spaces at commercial airlines to support mass transit	Reduce airport travel by limits on parking at airports.	No	Regulatory agencies do not have the legal authority to make local land use decisions. It is at the discretion of the regional or local airport authority to make	

## Modifications to Attachment C: RACM Analysis

Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
				local land use decisions pertaining to airports.  <u>It is necessary to have significant mass transit available at airports before this measure can be implemented. This is currently not the case.</u>	
7.10	No Central Business District (CBD) vehicles unless LEV or alt fuel or electric	Define high-use area and ticket any vehicles present unless they are low emitting, alternative fueled or electric.	No	The Legislature significantly reduced authority to implement indirect source control measures through revisions to the Health & Safety Code (40717.6, 40717.8, and 40717.9).  <del>Regulatory agencies do not have the legal authority to make local land use decisions. It is at the cities discretion to make local land use decisions.</del>	
7.14	Incentives for cities with good development practices	Provide financial or other incentive to local cities that practice air quality-sensitive development.	Yes		AQMD, SCAG
7.15	Cash incentives to foster jobs/housing balance	Specific to locality – encouraged by California Clean Air Plan.	<del>Yes</del> No	<u>No dedicated source of funding for this measure.</u>	
7.16	Trip reduction oriented development	<del>Specific to locality – encouraged by California Clean Air Plan.</del> <u>Land use decisions that encourage trip reductions.</u>	Yes		SCAG

## Modifications to Attachment C: RACM Analysis

Section 108 (f) 7. Programs to Limit or Restrict Vehicle Use in Downtown Areas or Other Areas of Emission Concentration Particularly During Periods of Peak Use					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
7.17	Transit oriented development	<del>Specific to locality—encouraged by California Clean Air Plan. Land use decisions that</del> <u>encourage walkable communities and multi-modal transit systems.</u>	Yes		SCAG
7.18	Sustainable development	<del>Specific to locality—encouraged by California Clean Air Plan. Land use decisions that create</del> <u>equitable standards of living to satisfy the basic needs of all peoples, all while taking the steps to avoid further environmental degradation.</u>	Yes		SCAG

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 8. Programs for the Provision of All Forms of High-Occupancy, Shared-Ride Services has been updated. Appendix IV-C, Attachment C, page C-16]

Section 108 (f) 8. Programs for the Provision of All Forms of High-Occupancy, Shared-Ride Services					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
8.1	Financial Incentives, Including Zero-Bus Fares	Provide financial incentives or other benefits, such as free or subsidized bus passes and cash payments for not driving, in lieu of parking spaces for employees who do not drive to the workplace.	Yes		AQMD <sub>1</sub> <u>Employer</u>
8.3	Preferential parking for carpoolers	Provide free, covered, near-building or similar incentives to carpoolers.	Yes		AQMD <sub>1</sub> <u>Employer</u>
8.4	Credits and incentives for carpoolers	Self-explanatory – form depends on locality.	Yes		AQMD <sub>1</sub> <u>Employer</u>
8.5	Employers provide vehicles to carpoolers for running errands or emergencies	Having vehicles available for workday errands makes it easier to go to work without one.	Yes		AQMD <sub>1</sub> <u>Employer</u>
8.6	Subscription services	Free van services to provide transportation for the elderly, handicapped or other individuals who have no access to transportation.	Yes		County <sub>1</sub> <u>Employer</u>
8.7	School car pools	Self explanatory.	No	<del>Regulatory agencies do not have the legal authority to make local land use decisions.</del> Not economically feasible and insufficient resources available for implementation.	
8.8	Guaranteed ride home	Self explanatory.	Yes		AQMD <sub>1</sub> <u>Employer</u>

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 9. Programs to Limit Portions of Road Surfaces or Certain Sections of the Metropolitan Area to the Use of Non-Motorized Vehicles or Pedestrian Use, Both as to Time and Place has been updated. Appendix IV-C, Attachment C, page C-17]

Section 108 (f) 9. Programs to Limit Portions of Road Surfaces or Certain Sections of the Metropolitan Area to the Use of Non-Motorized Vehicles or Pedestrian Use, Both as to Time and Place					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
9.7	Cash rebates for bikes	Provide financial incentives to purchase bicycles and thereby encourage use.	Yes		AQMD, <u>Employer</u>

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 10. Programs for Secure Bicycle Storage Facilities and Other Facilities, Including Bicycle Lanes, for the Convenience and Protection of Bicyclists, in Both Public and Private Areas has been updated. Appendix IV-C, Attachment C, page C-19]

Section 108 (f) 10. Programs for Secure Bicycle Storage Facilities and Other Facilities, Including Bicycle Lanes, for the Convenience and Protection of Bicyclists, in Both Public and Private Areas					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
10.1	Bike racks at work sites	Self Explanatory.	Yes		AQMD, <u>Employer</u>

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 13. Employer-Sponsored Programs to Permit Flexible Work Schedules has been updated. Appendix IV-C, Attachment C, page C-23]

Section 108 (f) 13. Employer-Sponsored Programs to Permit Flexible Work Schedules					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
13.1	Alternative work schedules	Enables workers to choose their own working hours within certain constraints. Flextime provides the opportunity for employees to use public transit, ridesharing, and other Nonmotorized transportation. A related strategy, staggered work hours, is designed to reduce congestion in the vicinity of the workplace. Alternative workweeks have been implemented extensively by large private and public employers.	Yes		AQMD <sub>1</sub> <u>Employer</u>
13.2	Modifications of work schedules	Implement alternate work schedules that flex the scheduled shift time for employees. Encourage the use of flexible or staggered work hours to promote off-peak driving and accommodate the use of transit and carpooling.	Yes		AQMD <sub>1</sub> <u>Employer</u>
13.3	Telecommunications-Telecommuting/Teleconferencing	Encourage the use of telecommuting-telecommuting/teleconferencing in place of motor vehicle use where appropriate.	Yes		AQMD <sub>1</sub> <u>Employer</u>

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 14. Programs and Ordinances to Facilitate Non-Automotive Travel, Provision to and Utilization of Mass Transit, and to Generally Reduce the Need for Single-Occupant Vehicle Travel, as Part of Transportation Planning and Development Efforts has been updated. A footnote has been added to measures 14.5 and 14.8 to indicate their relation to AQMD Rule 2202, On-Road Vehicle Mitigation Options. Appendix IV-C, Attachment C, pages C-24 and C-25]

Section 108 (f) 14. Programs and Ordinances to Facilitate Non-Automotive Travel, Provision to and Utilization of Mass Transit, and to Generally Reduce the Need for Single-Occupant Vehicle Travel, as Part of Transportation Planning And Development Efforts					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
14.5*	Evaluation of the air quality impacts of new development and mitigation of adverse impacts	Evaluate the air quality impacts of new development and mitigate any adverse impacts.	Yes		AQMD, SCAG
14.8*	Incentives for cities with good development practices	Provide financial or other incentive to local cities that practice air quality-sensitive development.	Yes		AQMD, SCAG

\* This measure relates to AQMD Rule 2202, On-Road Motor Vehicle Mitigation Options. Rule 2202 provides a menu of options for employers in choosing how they will comply with the rule. The primary implementer is the employer.

## Modifications to Attachment C: RACM Analysis

[Section 108 (f) 16. Program to Encourage the Voluntary Removal From Use and the Marketplace of Pre-1980 Model Year Light Duty Vehicles and Pre-1980 Model Light Duty Trucks has been updated. Appendix IV-C, Attachment C, page C-27]

Section 108 (f) 16. Program to Encourage the Voluntary Removal From Use and the Marketplace of Pre-1980 Model Year Light Duty Vehicles and Pre-1980 Model Light Duty Trucks					
Measure #	Measure Title	Description	Has It Been Implemented	Reasoned Justification for Not Implementing Measure	Implementing Agency or Agencies
16.2	Buy vehicles older than 1975	Self explanatory.	Yes		ARB, AQMD
16.3	Demolish impounded vehicles that are high emitters	Self explanatory.	<del>Yes</del> No	<u>Not economically feasible.</u>	AQMD
16.4	Do whatever is necessary to allow cities to remove the engines of high emitting vehicles (pre-1980) that are abandoned and to be auctioned	Self explanatory.	<del>Yes</del> No	<u>Not economically feasible.</u>	AQMD
16.5	Accelerated retirement program	Identify high emitting vehicle age groups and develop a program to remove them from use.	Yes		ARB, AQMD